



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

*Petition #20*

*20/lt  
8/2/02  
A.W.*

In re application of

MANABU TOMITA ET AL.

Serial No. 09/387,477 (TIJ-26105)

Filed September 1, 1999

For: SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

Art Unit 2822

Examiner M. Guerrero

Commissioner for Patents  
Washington, D. C. 20231

Sir:

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JUN 12 2002  
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**PETITION TO COMMISSIONER**

Applicants, through their attorney, hereby petition the Commissioner for Patents to enter the amendment filed after final rejection for the reasons as stated hereinbelow. No fee is believed to be due, however, should a fee be due, please charge same to Deposit Account No. 20-0668.

The facts are that the amendment filed after final rejection was not entered on the ground that the amendment raised new issues that would require further consideration and/or search. No reason for this action was provided. The refusal to enter cannot be substantiated on the record on the basis listed therefor.

The amendment after final rejection included an addition to the specification, the subject matter for which was contained in claims 1 and 2 as originally filed and an

amendment to claim 1. Claim 1 as amended is reproduced hereinbelow with underlining indicating added verbiage and brackets indicating deleted verbiage.

A semiconductor device manufacturing method comprising the steps of:  
providing a semiconductor substrate having a lower electrically conducting layer thereon and an electrically insulating layer disposed over said electrically conducting layer;  
providing a gas etchant comprising a mixed gas of [multiple] two different fluorocarbon gases, one of said fluorocarbon gases having a low carbon atoms to fluorine atoms ratio (hereinafter C/F ratio) and the other of said gases having a high C/F ratio, [each fluorocarbon gas having a different ratio of carbon atoms to fluorine atoms,] the fluorocarbon gas having the lower ratio of carbon atoms to fluorine atoms forming at least one half of the mixed gas; and  
etching a connection hole through said electrically insulating layer in a single etching step to said electrically conducting layer using only said mixed gas as the etchant.

As can be seen, the only amendments made were in the second full paragraph after the preamble of the claim and included a change of “multiple” to --two--and a change of “each fluorocarbon gas having a different ratio of carbon atoms to fluorine atoms” to --one of said fluorocarbon gases having a low carbon atoms to fluorine atoms ratio (hereinafter C/F ratio) and the other of said gases having a high C/F ratio--. A review of the claim and the grammar clearly indicates that this claim prior to amendment was referring to only two different fluorocarbon gases. The claim prior to amendment clearly used the comparative word “lower” in line 9 of the claim as reproduced above which requires a comparison or association with two entities. A comparison or association with more than two entities would have required use of the word “lowest” rather than --lower--. It follows that the change in the claim was merely cosmetic in that the grammar was improved since the claim always referred to only two gases.